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JACK-PINE BUDWORM EGG SURVEY ON THE CHEQUAMEGON NATIONAL FOREST - 1969

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INTRODUCTION

The most recent outbreak of jack-pine budworm, Choristoneura pinus pinus Free., occurred in 1966-1967. Since then, visible defoliation has occurred in small pockets and gradually is decreasing. Annual trend survey of budworm populations in the Lake States is made to observe fluctuations in order to develop a method which can predict severe outbreaks before damage occurs. This survey is part of the trend survey.

METHODS

Nine permanent plots are systematically scattered throughout the jack-pine type of the Forest. Each plot is a jack pine stand at least 5 acres in size. Each sample consists of 4, 36 inch long branches (2 from mid-crown and 2 from lower-crown) taken from each of 10 dominant/co-dominant trees located in a cluster. The number of tips (current shoots) and the number of egg-masses and the degree of their parasitization was determined by a crew at Toumey Nursery. The average number of eggs per 100 tips was calculated with the assumption that an average egg-mass has 50 eggs. The egg numbers of parasitized egg-masses were reduced in proportion to the parasitization. Populations of more than 50 eggs per 100 tips are considered capable of causing severe damage, provided all budworms survive until pupation.

RESULTS

Only 1 plot (207) has high egg population (Table 1). However, since the budworm population has declined since 1967, severe defoliation is not expected.

Table 1. Results of 1969 egg survey and population trends since 1967.

Plot No.	Location			Number of eggs per 100 tips		
	T	R	S	1967	1968	1969
201	49	6	11	1367	20	6
202	49	6	23	1810	27	17
203	49	6	8	1131	88	8
204	48	7	33	1301	98	13
205	46	8	20	651	9	2
206	45	8	31	850	28	4
207	46	6	23	1031	125	63
208	49	6	16	----	36	2
209	48	7	29	----	5	4